1/2 025 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--EFFECT OF STRUCTURAL FACTORS ON THE RATIO OF SPECIFIC LOSSES P SUB1.0 OVER 50 AND P SUB1.5 O ER 50 OF COLD ROLLED TRANSFORMER STEEL -U-

AUTHOR-(04)-KAZADZHAN, L.B., SAKIR, N.P., SUKHANOV, L.F., SHAPOVALOV, A.P.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(2), 241-4

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--TRANSFORMER STEEL, COLD ROLLING, MAGNETIC PROPERTY, CRYSTAL LATTICE DEFECT, MAGNETIC HYSTERESIS, MAGNETIC INDUCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/0202 STEP NO--UR/0048/70/034/002/0241/0244

CIRC ACCESSION NO--AP0115906

UNCLASSIFIED

2/2 025 UNCLASSIFIED PROCESSING DATE--090CT70

CIRC ACCESSION NO--AP0115906

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT IS USUALLY ASSUMED THAT P SUB1.0-50 DEPENDS MORE ON THE STRUCTURE THAN P SUB1.5-50. IN THIS CONNECTION THE CAUSES WERE INVESTIGATED OF THE DIFFERENCES OF THE LOSS RATIOS AT VARYING VALUES OF THE MAGNETIC INDUCTION AMPLITUDE. INDUSTRIAL TRANSFORMER STEEL WAS EMPLOYED IN THE STUDY. LATTICE DEFECTS SUCH AS IMPURITIES OR RESIDUAL STRESSES INCREASE THE HYSTERESIS LOSSES AND DO NOT AFFECT THE EDDY CURRENT LOSSES. IT IS SUCH DIFFERENCES IN THE EFFECT OF STRUCTURAL FACTORS ON THE LOSS COMPONENTS THAT CAUSE A VARYING CHANGE IN THE TOTAL SP. LOSS AT DIFFERENT MAGNETIC-INDUCTION AMPLITUDES. FACILITY: NOVO-LIPETSK. MET. ZAVOD, NOVO-LIPETSK, USSR.

UNCLASSIFIED

Thermodynamics

USSR

KAZADZH, L. B., MOLOTILOV, B. V., SUKHANOV, L. F., FRANTSEVICH, I. V. and SHAPOVALOV, A. P., Institute of Precision Alloys, Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin, Novo-Lipetskiy Metallurgical Plant

"Effect of A High-Temperature Heat Treatment Medium on the Structure and Magnetic Properties of Transformer Steel"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol. 34, No. 2, Feb 70, pp 262-266

Abstract: The refining ability of various media in high-temperature annealing in industrial dome furnaces was studied by optical microscopy methods, by measuring magnetic properties and by determining the chemical composition of transformer steel. Four different steel compositions were tested in the experiment and their concentrations of Si, C, S, N, O, Al, Mn, and H before and after annealing in a vacuum or in a hydrogen or nitrogen medium are given in tabular form. It was found that high-temperature annealing in dome vacuum and gas furnaces did not ensure the required degree of refinement of the steel from C, N, O, and S impurities. Raising the degree of evacuation under high-temperature heat treatment of the steel in the most improved industrial furnaces also had little effect in improving the refinement. It was concluded that in order to

Card 1/2

USSR

KAZADZH, L. B., et al, Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, Vol. 34, No. 2, Feb 70, pp 262-266

lower specific losses and raise the output of high-grade transformer steels, heat treatment should be carried out under industrial conditions in a vacuum higher than 10^{-3} mm Hg or in dry hydrogen with a dew point $\leq -40°C$.

Card 2/2

USSR

SHAPOVALOV, L.A. (Moscow)

"Concerning Bifurcation of the Forms of Equilibrium of an Elastoplastic Rod and Ring Under Conditions of Continuing Loading"

Moscow, Prikladnaya Matematika i Mekhanika, No 2, March-April 1971, pp 206-215.

Abstract: The article deals with problems of the stability of a rectilinear rod and a round ring in the case of compression beyond the limit of elasticity on the basis of the conception of continuing loading. On the basis of an assumption of an equilibrium state of the deformation process beyond the limit of elasticity, there is considered the stability of a compressed rod with account taken of the true position of the boundary which divides the elastic region from the plastic region in the process of bulging. By means of asymptotic solution of nonlinear equations of elastoplastic equilibrium, an investigation is made of the nature of branching of the equilibrium forms in the region of the point of bifurcation. The equations of flexure in the supercritical state are obtained by the variational method and generalized the elastic equation of Euler for the case of elastoplastic deformations. In accordance with the conception of continuing loading, the external force is assumed to be an unknown increasing function of convergence of the ends of the rod. It is assumed that this function will permit expansion into an exponential series. By means of such an expansion with indeterminate
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USSR

SHAPOVALOV, L.A., Prikladnaya Matematika i Mekhanika, No 2, March-April 1971, pp 206-215

coefficients, it is possible to linearize the initial equations and to obtain, in closed form, the parametric equation of the set of curves which separate the elastic zone of the rod from its plastic zone. In conclusion, there is considered the stability of the elastoplastic equilibrium of a round ring under the action of increasing hydrostatic pressure, by means of the results obtained in the problem concerning the compressed rod. 5 figures, 7 bibliographic entries.

2/2

1/2 024 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--INVESTIGATION O: THE OPERATION OF A PULSE MODULATOR EMPLOYING A CONTROLLED D235G DIODE -U-

AUTHOR--SHAPOVALOV, N.S.

COUNTRY OF INFO--USSR

SOURCE--STUDIES OF THE IONOSPHERE (ISSLEDOVANIE IONOSFERY). (A70-37026 18-13) NOVOSIBIRSK, IZDATEL'STVO NAUKA, 1970, P. 228-235

DATE PUBLISHED-------70

SUBJECT AREAS--ATMOSPHERIC SCIENCES, ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--IONOSHPERIC STATION, THYRISTOR, SEMICONDUCTOR TRIODE, IONOSPHERE/(U)D235G THYRISTOR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605030/E12 STEP NO--UR/0000/70/000/000/0228/0235

CIRC ACCESSION NO--AT0141870

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--04DEC70

2/2 024

CIRC ACCESSION NO--AT0141870

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISCUSSION OF THE APPLICATION OF D235G SILICON CONTROLLED SWITCHES (THYRISTORS) IN THE PULSE MODULATORS EMPLOYED BY IONOSPHERIC STATIONS. THE CIRCUIT DIAGRAM OF A PULSE MODULATOR EMPLOYING A D235G THYRISTOR IS GIVEN AND DISCUSSED, AND THE ADVANTAGES OF THIS PULSE MODULATOR OVER MODULATORS EMPLOYING SEMICONDUCTOR TRIODES AR NOTED.

UNCLASSIFIED

UDC 621.762.2

USSR

BABICH, D. D., SOROKIN, I. P., SHAPOVALOVA, O. M., and GLUCHCHENKO, ZH. N.

"Influence of the Medium on the Degree of Fractionation and Quality of Electrolytic Titanium Powders"

Sb. tr. Vses. n.-i. i proyektn. in-t titana [Collected Works of All-Union Scientific-Research and Planning Institute for Titanium], 6, 1970, pp. 62-71, (Translated from Referativnyy Zhurnal—Metallurgiya, No. 1, 1971, Abstract No.1 G457 by the authors).

Translation: Results are described from studies of the influence of grinding conditions of cathode precipitate in a ball mill in various media on the fractional composition and quality of electrolytic Ti. Grinding of the cathode precipitate was performed under the following conditions: in a medium of electrolyte under Ar in water after leaching in 1% HCl, in the process of leaching in 1% HCl and in a medium of KCl plus NaCl. The optimal grinding effect is observed during leaching of the cathode precipitate directly in the ball mill in 1% HCl. However, this decreases the pressability of the powder somewhat. Pressability is not changed by grinding in the other media. The powder was studied by X-ray diffraction and microscope. 4 figures; 3 tables.

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Acc. Nr.: AP0100668 Ref. Code: UR0381

USSR UDC: 620.179.16

BORDYUGOV, G. T., LONCHAK, V. A., SHAPOVALOV, P. F., and BANNU, D. S.

"Improving the Noise Immunity of the Mirror-Shadow Ultrasonic Control Method"

Sverdlovsk, Defektoskopiya, No. 1, 1970, pp 11-13

Abstract: The mirror-shadow ultrasonic control method operates on the principle that the transmitter and receiver of the ultrasonic signal are mounted to one side of the product, with the received signal taken from the surface at the opposite side. A defect is indicted by a reduction in the signal amplitude below some predetermined threshold level. The effect of noise is to reduce the signal amplitude even though there is no defect, and the result is the unjustified discard of a normal product. This article describes an improved defectoscope using the mirror-shadow method designed for better noise immunity through the use of coded radiation of the ultrasonic signal. A block diagram of the new system is given together with a short explanation of how it works.

1/1 Reel/Frame 19850137 EB 21

1/2 029 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--MAGNETIC CRYSTALLOGRAPHIC ANISOTROPY OF SINGLE CRYSTALS OF LITHIUM AND LITHIUM ZINC FERRITES WITH TRACE COBALT DOPANTS -U-
AUTHOR-(04)-SELEZNEV, V.N., PUKHOV, I.K., DRONIN, A.I., SHAPOVALOV, V.A.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(3), 885-91

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, PHYSICS, CHEMISTRY

TOPIC TAGS--SINGLE CRYSTAL, LITHIUM, IRON OXIDE, COBALT, ZINC FERRITE, MAGNETIC PROPERTY, CRYSTAL LATTICE STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/0581 STEP NO--UR/0181/70/012/003/0885/0891

CIRC ACCESSION NO--AP0105564
UNCLASSIFIED

2/2 029 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0105564

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE 1ST K SUB1 AND 2ND K SUB2 MAGNETIC ANISOTROPY CONSTS. WERE MEASURED FOR ANNEALED AND TEMPERED SINGLE CRYSTAL FERRITES, LI SUBOTIMES5 NEGATIVE(X-2) FE SUB2TIMES5 NEGATIVE(X-2) CO SUBX O SUB4 (O SMALLER THAN OR EQUAL TO X SMALLER THAN OR EQUAL TO 0.005) AND LI SUBOTIMES39 NEGATIVE(X-2) FE SUB2TIMES39 NEGATIVE(X-2) ZN SUBOTIMES22 CO SUBX O SUB4 (X EQUALS 0,0.005), AT 4.2-600DEGREES K. MEASUREMENTS WERE CARRIED OUT BY THE METHOD OF FERROMAGNETIC RESONANCE AT SIMILAR TO 9500 AND SIMILAR TO 36,700 MHZ. WITH INCREASED CONTENT OF CO, THE CONTRIBUTIONS TO K SUB1 MAGNITUDE OF DELTA K SUB1 AND K SUB2 MAGNITUDE OF DELTA K SUB2 INCREASE LINEARLY. ON TEMPERING OF LI-CO FERRITES, MAGNITUDE OF DELTA K SUB1 AND MAGNITUDE OF DELTA K SUB2 DECREASE 3 FOLD. TEMPERING OF LI-ZN-CO FERRITES AFFECTS ONLY LITTLE THE CONTRIBUTION OF CO TO THE ANISOTROPY CONSTS. THE ORDER DISORDER TRANSITION IN LI FERRITE STRONGLY AFFECTS THE CONTRIBUTION OF CO IONS TO K SUB1 AND K SUB2. AT GREATER THAN 60DEGREES, EXPTL. OBSD. TEMP. DEPENDENCES OF DELTA K SUB1 AND DELTA K SUB2 IN THE ORDERED CRYSTALS CAN BE SATISFACTORILY DESCRIBED BY THE THEORY OF TACHIKI; HOWEVER, AT 4.2DEGREES K, EXPTL. AND THEORETICAL DATA DIFFER CONSIDERABLY. POSSIBLE CAUSES ARE DISCUSSED.

UNCLASSIFIED

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910008-7"

USSR

UDC: 620.198

SHAPOVALOV, V. P., GORBUNOV, N. S., BRYNZA, A. P., FEDASH, V. P., LEGASHOVA, T. P.

"Corrosion Resistance and Electrochemical Behavior of Titanium Coatings"

Moscow, Zashchita Metallov, Vol 9, No 3, Jul-Aug 73, pp 465-467.

Abstract: The corrosion and electrochemical behavior of diffusion titanium coatings was studied in acid, alkaline and organic media. The corrosion tests and studies of electrochemical behavior of titanium coatings produced from the vapor phase in a vacuum showed that diffusion titanium coatings can protect iron-carbon alloys from the effects of certain corrosive media. The resistance of type 3 steel, titanium coated, with exposures of up to 450 hours, is significantly higher than that of carbon steel and stainless steels, and in many cases is equal to the resistance of titanium alloys.

USSR

UDC 669.295

SHAPOVALOV, V. P., and POPLAVKO, V. G.

"Titanium Coating of Reactors for Magnesium Thermal Production of Titanium"

Tsvetnyye Metally, No 3, Mar 71, pp 64-66

Abstract: Contactless diffusion titanium coating of reactors from the vapor phase in a vacuum is studied. The rate of heating of the metalizer, temperature of removal of impurities, and residual pressure are noted. A mode is presented for titanium coating of reactors of Kh18N10T steel in the case of use of a fresh metalizer and after performance of one or two processes.

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USSR UDC 621.382.3

SHAPOVALOV, V.P., PALEY, V.M.

"Step-By-Step Fusion Of The Base Of Alloy-Type Germanium Transistors"

Elektron. tekhnika. Nauchno-tekhn. sb. Poluprovodn. pribory (Electronic Technology. Scientific-Technical Collection. Semiconductor Devices), 1970, No 1(51), pp 116-120 (from RZh--Elektronika i yeye primeneniye, No 12, December 1970, Abstract No 12B186)

Translation: The step-by-step fusion is investigated of the base of alloy-type germanium triodes with the effect of a series of short pulses between the emitter and collector leading to overstress of the transistor. It is shown that the delivery of each pulse leads to an increase of the local depth of fusion of the base at the most vulnerable point of the fusion front of the p-n junction. The variation factor of the fusion front of the p-n junction γ is introduced. The dependence is determined of the quantity of voltage pulses necessary for complete breakdown of the structure, on the value γ. An assumption is expressed concerning the possibility of using the magnitude γ for rejecting potentially unreliable alloy-type transistors. 7 ref. Summary.

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1/2 023 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--PROPERTIES OF FILLED POLY(VINYL CHLORIDE) -U-

AUTHOR-(03)-POMOGAYLO, A.D., KESTEL'MAN, N.YA., SHAPOVALOV, YU.I.

COUNTRY OF INFO--USSR

SOURCE--MEKH. POLIM. 1970, 6(1), 124-6

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--POLYVINYL CHLORIDE, HARDNESS, TITANIUM DIOXIDE, FILLER, SILICA GEL, CARBON PRODUCT, MOISTURE MEASUREMENT, PLASTIC MECHANICAL PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0813 STEP NO--UR/0374/70/006/001/0124/0126

CIRC ACCESSION NO--AP0107355

UNCLASSIFIED

2/2 023 UNCLASSIFIED PROCESSING DATE--020CT70

CIRC ACCESSION NO--AP0107355

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HARDNESS AND RIGIDITY OF POLY(VINYL CHLORIDE) (I) SAMPLES FILLED WITH TIO SUB2 POWD. SILICA GEL, AND ACETYLENE BLACK INCREASE WITH INCREASING AT. RADIUS OF THE FILLER CENTRAL ATOM, I.E. TI LARGER THAN SI LARGER THAN C. TIO SUB2 FILLED SAMPLES HAD LOWER ABRASION RESISTANCE THAN THOSE FILLED WITH SIO SUB2 OR C. THERMOPROCESSING I FILLED WITH C DID NOT SIGNIFICANTLY INFLUENCE THE AMT. OF ABRASION, BUT WEAR SHARPLY INCREASED FOR SAMPLES FILLED WITH SIO SUB2 AFTER THERMOPROCESSING IN OIL AND IN WATER. MOISTURE ABSORPTION WAS GREATEST FOR SAMPLES FILLED WITH TIO SUB2 AND LEAST FOR THOSE FILLED WITH SIO SUB2.

UNCLASSIFIED

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USSR

BASOV, N. G., GROMOV, V. V., KOSHELEV, Ye. L., MARKIN, Ye. P., ORAYEVSKIY, A. N., SHAPOVALOVA, O. S., SHCHEGLOV, V. A., Physics Institute imeni P. N. Lebedev, Academy of Sciences, USSR

"A Continuous-Action DF — CO_2 Chemical Laser"

Moscow, Pis'ma v (Letters to the) Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 13, No 9, 5 May 1971, pp 496-498

Abstract: A report is given on obtaining continuous laser emission in subsonic gas streams. Generation takes place due to CO_2 molecules excited by means of the transmission of energy from oscillatorily excited DF* molecules obtained in the process of a chain reaction of deuterium with fluorine with purely chemical initiation. 2 figures. 2 bibliographic entries.

1/1

USSR

UDC 632.951

GOLUBEVA, Z. Z. SHAPOVALOVA, G. K., and POPOV, P. V., All-Union Scientific Research Institute of Chemical Means for Plant Protection

"Combined Use of Acaricides and Insecticides"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 10, No 12, 1972, pp 33-34

Abstract: Some mixtures of an insecticide with an acaricide were found to exert a greater effect on pests than that corresponding to addition of the two activities. Furthermore, development of resistance of the pests to the chemical agents may be slowed down if mixtures of this type are used. To study the combined toxic action on pests of binary mixtures of insecticides with acaricides, acrex (I), amiphos (II), anthio (III), benzophosphate (IV), galekron (V), kelthane (VI), milbex (VII), neoron (VIII), sevin (IX), phthalophos (X), and chlorophos (XI) were used. I, V, VI, VII, and VIII were selectively acting acaricides that were practically devoid of insecticidal activity. 1:1 mixtures of the pesticides were used in tests. The insecticidal activity was determined in experiments with gypsy moth (Porthetria dispar L.) larvae of the second instar and adult house flies and the acaricidal activity in experiments with adult Tetranychus urticae Koch mites. The values of LD_{50} of individual pesticides and the coefficients of combined action (CCA) of the binary mixtures towards the three pests were determined (cf. Popov, Khimiya v Sel'skom Khozyaystve, No 8, 73, 1965). Potentiation was indicated by CCA values > 1 and

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USSR

GOLUBEVA, Z. Z., et al., Khimiya v Sel'skom Khozyaystve, Vol 10, No 12, 1972, pp 33-34

antagonism of the two ingredients of mixtures by CCA values < 1. In the first approximation, almost all of the mixtures produced an effect that was at least additive. The highest levels of potentiation were exhibited by X + V (CCA 3.6), XI + V (CCA 3.3) and XI + VIII (CCA 2.6) in experiments with gypsy moth larvae and by XI + V (CCA 4.4) and XI + XII (CCA 2.3) in experiments with T. urticae mites. IX + I, IX + VI, and IX + VII, and CCA values of which were in the 0.5-0.7 range for both insecticidal and acaricidal activity, should not be used unless these values can be revised in the future on the basis of more precise LD_{50} indices (determinations in the CCA range of 0.5-2.0 were somewhat uncertain because of fluctuations in the LD_{50} values).

USSR UDC 632.95

SHAPOVALOVA, G. K., SEDYKH, A. S., ABELENSHCHEVA, G. M., GALITSINA, V. V., and MARCHENKO, L. F.

"Insecticidal Action and Effectiveness of Phthalophos"

V sb. Khim sredstva zashchity rast. (Chemical Agents for Plant Protection -- collection of works), vyp 1, Moscow, 1970, pp 8-14 (from RZh-Khimiya, No 11, Jun 72, Abstract No 11N394)

Translation: Phthalophos in concetrations of 0.075-0.1% is an effective substitute for DDT in controlling many pests of orchard, berry, vegetable, commerical and fodder crops. Residues of the insecticide remain toxic for pests for a shorter term than DDT. Phthalophos can be used with zineb and copper oxychloride.

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USSR

UDC 632.951

SHAPOVALOVA, G. K., SEDYKH, A. S., and ABELENTSEVA, G. M., All Union Scientific Research Institute of Chemical Plant Protectants

"The Effectiveness of Using Phthalophos and Benzophosphate Against the Gooseberry Fruit Worm and Residues of the Insecticides on Berries"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 8, No 8, Aug 70, pp 34-35

Abstract: In 1969 in the orchard of the "Otradnoye" training farm of the Timiryazev Agricultural Academy the authors tested a 20-percent emulsifiable concentrate of phthalophos (Imidan), a 50-percent wettable phthalophos powder and a 35-percent emulsifiable concentrate of benzophosphate (Phosalone) for controlling the gooseberry fruit worm, Zophodia convolutella Hb. The concentration of the insecticides was 0.1 percent, a. i. Gooseberry shrubs were sprayed once (before flowering, 13 May, or a week after flowering, 30 May) or twice, 13 and 30 May. The sprayings were liberal, until the liquid was dripping off the leaves. The effectiveness of treatment was determined 7 July, about two weeks before picking, and the residues of the insecticides on the berries 12 July. The injury to berries by caterpillars on control unsprayed bushes was 12.7 $\pm$ 1.9 percent. The berry injury was 3.5-4 times

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USSR

SHAPOVALOVA, G. K., et al, Khimiya v Sel'skom Khozyaystve, Vol 8, No 8, Aug 70, pp 34-35

less than in control in the case of a single spraying before flowering, 6-12 times less after a single post-flowering spraying (similar results in the case of a double spraying). Residues were analyzed by thin-layer chromotography and the toxicological (biological) method. Residues of 1 mg/kg were detected by thin-layer chromatography in a weighed sample of 40-50 g, while none of the samples taken after a double spraying revealed residues. Residues not exceeding 0,2 mg/kg were found by the toxicological method on berries sprayed with a phthalophos suspension or emulsion, 0.7 mg/kg on berries sprayed with a benzophosphate emulsion.

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UDC 632.95

USSR

SHAPOVALOVA, G. K., ROMANOVA, V. V., MARCHENKO, L. F., GUNAR, M.I. SHUMYATSKAYA, T. N., MIKHALYUTINA, YE. B., SHVETSOVA-SHILOVSKAYA, K. D., and MEL'NIKOV, N. N.

"Insecticide"

USSR Authors' Certificate No 244800, filed 9 Feb 68, published 15 Jan 70, (from RZh-Khimiya, No 20 (II), 25 Oct 70, Abstract No 20 N547P by S. LYUBARSKAYA)

Translation: The authors suggest as insecticides compounds of the formula (RO)(R'O)P(X)(OR") (I; R and R' = Me, Et; R" = acetyl-, halogen- or alkyl-substituted phenyl or naphthyl; X = O or S), which are obtained by the interaction of dialkyl chlorophosphates or thiophosphates with the corresponding phenols or naphthols or phenolates in MeCN with K_2CO_3 at 75-80° or in an inert solvent at 90-110°. The following are obtained: I (R = R', R" = substituted phenyl; given are R, substituents in the phenyl ring, X, boiling point in °C/mm, d_4^{20}, $n^{20}D$): Me, 2-Ac, S, 120-6/0.14, 1.2465, 1.5372; Et, 2-Ac, S, 110-4/0.09, 1.1911, 1.5271; Et, 3-Ac, S, 120-4/0.1, 1.1378, 1.5260; Me, 4-Ac, O, 124-30/0.08, 1.2539, 1.5070; Et; 4-Ac, O, 130-3/0.1, 1.1846, 1.4970; Me, 4-Ac, S, 120-3/0.08, 1.2648, 1.5445; Et, 4-Ac, S, 127-30/0.08, 1.1822, 1.5280; Me,

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USSR

SHAPOVALOVA, G. K., et al., USSR Authors' Certificate No 244800

2-Ac-4-Cl, S, 136-43/0.15, 1.3519, 1.5510; Et, 2-Ac-4-Cl, S, 126-30/0.13, 1.2531, 1.5295; Et, 2-Ac-5-Cl, S, 125-7/0.1, 1.2542, 1.5325; Me, 2-Ac-6-Cl, 0.127-9/0.11, 1.3555, 1.5118; Me, 4-Ac-2Cl, 0.152-3/0.15, 1.3556, 1.5218; Et, 4-Ac-2-Cl, O, 159-61/0.12, 1.2699, 1.5094; Me, 4-Ac-2-Cl, S, 135-43/0.18, 1.3463, 1.5538; Me, 2-Ac-4-Me, S, 133-8/0.15, 1.2340, 1.5405; Me, 2-Ac-5-Me, S, 132-8/0.17, 1.1864, 1.5388; Me, 4-Ac-2-Me, S, 153-6/0.18, 1.2400, 1.5465; Et, 4-Ac-3-Me, O, 150-1/0.2, 1.1740, 1.5015; Me, 4-Ac-3-Me, S, 155-61/0.22, 1.2404, 1.5442; Et, 4-Ac-3-Me, S, 152-4/0.2, 1.1656, 1.5290; Me, 2-Ac-4-Me_2, S, 130-2/0.05, 1.1927, 1.5380; Et, 2-Ac-4, 5-Me_2, S, 135-40/0.05, 1.1312, 1.5200; Et, 2-EtCO, O, 130-2/0.1, 1.2565, 1.4930; Me, 4-EtCO, O, 149-52/0.08, 1.2273, 1.5070; Me, 4-EtCO, S, 142-7/0.1, 1.2264, 1.5420; I (R = Me, R' = Et, X = S; R" = substituted phenyl; given here are substituents in the phenyl nucleus, boiling point in °C/mm, d_4^{20}, $n^{20}D$): 4-Ac, 121-4/0.1, 1.2338, 1.5368; 2-Ac, 120-4/0.18, 1.2245, 1.5318; 4-Ac-2,5-Me_2, 156-8/0.05, 1.1896, 1.5375; 4-EtCO, 148-52/0.1, 1.195, 1.5321; I (R" = 2-acetylnaphthyl; given here are R, R', X, boiling point in oC/mm, d_4^{20}, $n^{20}D$): Me, Me, O, 156-7/0.18, 1.3548, 1.5630; Et, Et, O, 155-60/0.1, 1.2177, 1.5465; Me, Et, S, 170-3/0.2,

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USSR

SHAPOVALOVA, G. K., et al., USSR Authors' Certificate No 244800

1.2396, 1.5850; Et, Et, S, 159-62/0.14, 1.2003, 1.5740. I's are approximately as active as chlorophos against Musca domestica, Calandra orycae and Porthetria dispar and have low toxicity for warm-blooded animals.

3/3

1/2 015 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--COMPATIBILITY OF FUNGICIDES WITH INSECTICIDES -U-

AUTHOR-(03)-SEDYKH, A.S., SHAPOVALOVA, G.K., ABELENTSEVA, G.M.

COUNTRY OF INFO--USSR

SOURCE--KHIM. SEL. KHOZ. 1970, 8(2), 114

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FUNGICIDE, INSECTICIDE/(U)SEVIN INSECTICIDE, (U)ANTHIO INSECTICIDE, (U)PHOSALONE INSECTICIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1993/0319 STEP NO--UR/0394/70/008/002/0114/0114

CIRC ACCESSION NO--AP0113245

UNCLASSIFIED

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910008-7"

2/2 015 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0113245

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INSECTICIDAL EFFECTIVENESS OF AQ. SOLNS. OF 0.05PERCENT ANTHIO (I), 0.1PERCENT SEVIN (II), 0.1PERCENT FITIOS (III), AND 0.2PERCENT PHOSALONE (IV) MIXED WITH 0.1PERCENT BORDEAUX MIXT. DECREASES TO 7, 0.2, 13, AND 80PERCENT, RESP.; FOR 0.25PERCENT ZINEB TO 80 AND 67PERCENT WITH I AND II, RESP., AND DOES NOT DECREASE WITH III AND IV; FOR 0.25PERCENT CU OXYCHLORIDE TO 78, 50, AND 93PERCENT WITH I, II, AND III, RESP., AND IS NOT ALTERED WITH IV. MIXING I-IV WITH 0.25PERCENT POLYCARBAZINE DOES NOT CAUSE ANY DECREASING OF EFFECTIVENESS. FACILITY: VSES. NAUCH.-ISSLED. INST. KHIM. SREDSTV ZASHCH. RAST., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 632.951

SHAPOVALOVA, G. K., and GALITSINA, V. V., All-Union Scientific Research Institute of Chemical Means of Plant Protection

"The Influence of Water-Soluble Coating on the Insecticide Effectiveness of Benzophosphate"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 11, No 2, 1973, p 37

Abstract: A package containing 1 kg of the 30% wetting powder of benzophosphate, in which the soluble coating constituted 3.3% of the weight of the active ingredient or 1% of the total, was dissolved so that in the solution the coating made up only 0.003%. The preparation was then sprayed on the silkworm Porthetria dispar and the house fly Nusca domestica at a rate of 35 ml/m^2, or 350 l/ha. Mortality was calculated in 24 hours for the flies and in 48 hours for the silkworms. Results indicated that the coating of plastified glycerin was not in itself toxic. It had no effect on the contact toxicity of benzophosphate for houseflies, but somewhat reduced its effectiveness for silkworms.

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Acc. Nr: AP0034053 Abstracting Service: CHEMICAL ABST. 4-70 Ref. Code: UR0078

S

71355s Cesium iodide-silver iodide system. Kosmienko, V. P.; Shapovalova, G. M.; Kolesnikov, V. N. (Khar'kov. Gos. Univ., Khar'kov, USSR). Zh. Neorg. Khim. 1970, 15(1), 262-3 (Russ). Melting diagram of CsI-AgI system is constructed. The system forms an incongruently melting compd., 2CsI.AgI. HMJR

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18

REEL/FRAME 19710696

1/2 017 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--PREPARATION OF AN EXPERIMENTAL BATCH OF THE ADDITIVE DF11 AT THE POLOTSK PETROLEUM REFINERY -U-

AUTHOR-(04)-MELKIN, YU.A., VYALTSIN, N.I., SHAPOVALOVA, L.M., SAVONKINA, M.G.

COUNTRY OF INFO--USSR

SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW) 1970, (5), 48-9

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--CHEMICAL SYNTHESIS, ANTIOXIDANT ADDITIVE, ZINC OXIDE, PETROLEUM REFINERY/(U)DF11 ANTIOXIDANT ADDITIVE, (U)VNIINP360 ADDITIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/1959 STEP NO--UR/0318/70/000/005/0048/0049

CIRC ACCESSION NO--AP0133803

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--13NOV70

2/2 017

CIRC ACCESSION NO--AP0133803

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ANTIOXIDANT DF-11 WAS PREPD. BY TREATING P SUB2 S SUB5 WITH MIXED ISO-BUOH,2,ETHYLHEXANOL, NEUTRALIZING THE ACID WITH ZNO, DILG. WITH SOLVENT GASOLINE "KALOSHA", SEPG. THE MECH. IMPURITIES, AND DISTG. THE SOLVENT. THE SAME EQUIPMENT WAS USED FOR PREPG. THE ADDITIVE VNIINP-360. FACILITY: POLOTSK. NEFTEPERERAB. ZAVOD, POLOTSK, USSR.

UNCLASSIFIED

AA0044784 SHAPOVALOVA UR 0482 O.K.

Soviet Inventions Illustrated, Section II Electrical, Derwent,

2/70

243014 CIRCUIT FOR VERIFYING SIGNALS. A signal incoming on the rail (9) to the receiving/transmitting module (1) is memorized in (2) decoded in (3) and amplified by (4). The coder (6) returns to the receiving module a signal which should be identical to that being verified. The signals are compared at a control point (external) and a coded message is despatched to the comparison module (7) for another check. If everything is all right the relay (8) operates and one of the amplifiers (5) issues a signal for operating a required piece of apparatus.

28.2.68 as 1222288/18-24.N.K.ARKHIPOVA et al. CENTRAL INST.OF COMPLEX AUTOMATION.(23.9.69.) Bul 16/5.5.69. Class 21c, 74b. Int.Cl.G 05f, G 08c.

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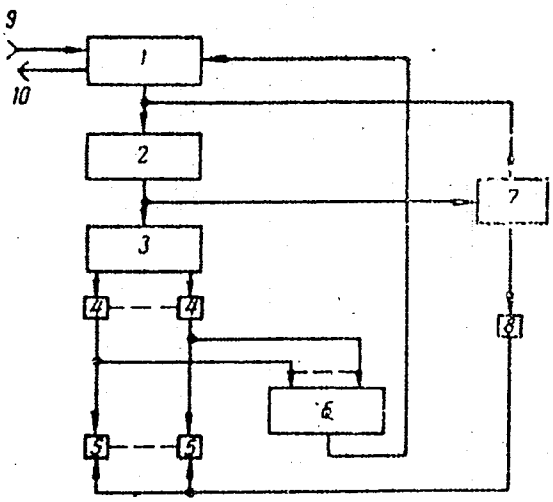
19771597

AA0044784



AUTHORS: Arkhipova, N. K.; Dmitriyev, V. F.; Shapovalova, O. K.
Tsentral'nyy Nauchno - Issledovatel'skiy Institut Kompleksnoy Automatizatsii

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19771598

USSR UDC 669.295/145.2

BABICH, D. D., SOROKIN, I. P., SHAPOVALOVA, O. M., and GLUSHCHENKO, Zh. N.

"Effect of the Medium on the Degree of Pulverization and the Quality of Electrolytic Titanium Powders"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 62-71

Translation: Results of research to study the effect of conditions for pulverizing the cathode deposit in a ball mill in different media on the fractional composition and quality of electrolytic titanium are described. Pulverizing the cathode deposit was done under the following conditions: in a medium of electrolyte under argon; in water after leaching in 2% HCl; in the process of leaching in 2% hydrochloric acid; and in a medium of potassium chloride and sodium. As a result of the research, it is established that the most effective pulverization is observed where the cathode deposit is leached directly in a ball mill in 2% HCl. However, with this method the compactability of the powder is somewhat worsened. With pulverization in the other media, compactability does not change. The powder was subjected to X-ray and microscopic study. Four illustrations, three tables, and one bibliographic entry.

USSR

UDC 669.295.5

SHAPOVALOVA, O. M., MOLCHANOVA, Ye. K., and MINEYEVA, L. K.

"An Investigation of the Properties of the TB2 Titanium Alloy"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 117-122

Translation: A secondary titanium alloy, smelted from the waste products of machine building shavings, as developed by the All-Union Scientific Research Institute of Aviation Materials and the Institute of Titanium, is described. The chemical composition of the alloy is given: Ti — base; 3.0-5.5% Al; 1.0-3.0% Mo; 2.0% $\geqslant$ Cr; 1.5% $\geqslant$ Mn; 2.0% $\geqslant$ V; 2.0% $\geqslant$ Zr; 0.7% $\geqslant$ Fe; 0.15% $\geqslant$ C; 0.35% $\geqslant$ Si; 0.30% $\geqslant$ O; 0.06% $\geqslant$ N; and 0.015% $\geqslant$ H. Its mechanical properties are HB = 290 - 420 gigacalories/mm^2; σ_b = 100 $\div$ 135 gigacalories/mm^2; δ = 5 $\div$ 18%; ψ = 15 $\div$ 50%; a_{II} = 1-5 gigacalories $\cdot$ m/cm for the TB2 alloy. The mechanical properties of the alloy at increased temperatures (400°C) are determined, and the thermal stability at 400-500°C is studied after thermal cycling at 350, 400, and 450°C. The prospects for using the alloy as a heat-resistant material up to 400°C are also indicated. The high corrosion resistance of the TB2 alloy in certain aggressive environments is established, and the absence of a tendency to intercrystalline corrosion

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USSR

SHAPOVALOVA, O. M., et al., Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 117-122

is demonstrated. The TB2 alloy can also be used as a highly stable construction material that resists corrosion in many active environments. Three illustrations, six tables, and two bibliographic entries.

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USSR

UDC 615.332 (SIBIROMYCINUM).015.46

SHAPOVALOVA, S. P., Department of Chemotherapy, Institute of New Antibiotics, Academy of Medical Sciences USSR, Moscow

"Effect of Sibiromycin on Immunological Reactivity"

Moscow, Antibiotiki, No 3, 1972, pp 270-272

Abstract: Experiments were performed on mice and rabbits to study the effect of the new antineoplastic and antiviral antibiotic sibiromycin on antibody formation, number of antibody-forming cells, secondary immune response, and survival time of a homologous skin transplant. After injection of the animals with sheep erythrocytes as antigen, sibiromycin suppressed the formation of both complete and incomplete antibodies, especially after repeated use of the preparation. The latter also reduced the number of antibody-forming cells in the spleen where the population of cells forming hemolysins was one-fifth to one-tenth as large as in the untreated controls. Following 2 intraperitoneal injections of mice with sheep erythrocytes, 3 intravenous injections of sibiromycin (1 immediately after the second administration of the antigen, the other 2 at 72-hour intervals) did not prevent the hemagglutinin titer from increasing. Sibiromycin apparently suppresses antibody formation only in the inductive stage of the process.
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USSR

SHAPOVALOVA, S. P., Antibiotiki, No 3, 1972, pp 270-272

Skin flaps transplanted to the backs of mice given the antibiotic 24 hours before the operation and again afterward (twice at 72-hour intervals) survived 6 days longer than in the control (17 and 11 days, respectively). Thus, sibiromycin inhibits immunological reactions, both the proliferation of antibody-forming cells and the recipient response to a homologous transplant.

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Acc. Nr.: AP0029323

Ref. Code: UR 0297

PRIMARY SOURCE: Antibiotiki, 1970, Vol 15, Nr 1, pp63-67

EFFECT OF RUBOMYCIN C ON IMMUNOLOGICAL REACTIVITY OF ORGANISM

L. K. Artemova, S. P. Shapovalova

Institute for New Antibiotics, Moscow

Effect of rubomycin C on immunogenesis was different in various species of animals. The most active inhibition of immunogenesis was observed in rats and mice, whereas the antibiotic had no effect on production of antibodies in guinea pigs and rabbits. When administered intravenously in a single dose of 0.3 of LD_{50}, rubomycin C suppressed the phagocytic activity of leucocytes in the peritoneal cavity of mice. On multiple administrations the antibiotic had no effect on phagocytosis. On both the single and the multiple administration in a dose of 0.3 of LD_{05} rubomycin C had no effect on the absorption capacity of cells of the reticulo-endothelial system of mice. When administered intravenously in a single dose of 0.3 of LD_{50}, rubomycin C decreased the resistance of test animals to infections caused by Coli bacteria.

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REEL/FRAME

19680895

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USSR UDC 669.295

SHAPOVALOV, V. P., and POPLAVKO, V. G.

"Titanium Coating of Reactors for Magnesium Thermal Production of Titanium"

Tsvetnyye Metally, No 3, Mar 71, pp 64-66

Abstract: Contactless diffusion titanium coating of reactors from the vapor phase in a vacuum is studied. The rate of heating of the metalizer, temperature of removal of impurities, and residual pressure are noted. A mode is presented for titanium coating of reactors of Kh18N10T steel in the case of use of a fresh metalizer and after performance of one or two processes.

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USSR UDC: 512.25/.26+519.3:330.115

SHAPOVALOVSKIY, V. I.

"The Method of Duality in Some Extremum Problems on x_0x_n Two-Dimensional Networks"

Tr. 3 Zimn. shkoly po mat. programmir. i smezhn. vopr. (Works of the Third Winter School on Mathematical Programming and Related Problems, 1970, vyp. 3, Moscow, 1970, pp 675-686 (from RZh-Kibernetika, No 9, Sep 71, Abstract No 9V480)

Translation: A method is outlined for solving the following problems.

Problem 1. To find on network G the minimum and maximum stationary flows v_0 and v_1 respectively from x_0 to x_n.

Problem 2. Among all permissible stationary flows of fixed value $v \in [v_0, v_1]$ from x_0 to x_n on G to find the flow for which the number of arcs with a zero arc flow is a maximum. From the article.

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UDC 621.59

USSR

VERGOLA, V. Ye., GORBACH, V. P., PARIYSKIY, V. B., SHAPOVLOV, I. A.

"Machine for Investigation of Deformations at Temperatures Down to 1.5°K"

Moscow, Pribory i Tekhnika Eksperimenta, pp 252-254

Abstract: A low temperature machine is described for studies of deformation at temperatures down to 1.5°K, allowing up to nine specimens to be compression tested at the same time. The machine is designed for forces up to 200 kg, provides for 18 rates of deformation between 12 and $9 \cdot 10^{-5}$ mm/min and a maximum sensitivity of 25 g/1 mm of the strip chart recorder scale. Diagrams are recorded automatically in load-time coordinates.

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1/3 022 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--SYNTHESIS OF 1 METHYLPYRAZOLE AND 1 METHYL 2 PYRAZOLINEALDEHYDES AND THEIR ACETALS -U-

AUTHOR-(02)-SHAPRANOVA, N.I., SOMIN, I.N.

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COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (3), 404-6

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC SYNTHESIS, PYRAZOLE, ALDEHYDE, ACETAL, IR SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0212 STEP NO--UR/0409/70/000/003/0404/0406

CIRC ACCESSION NO--AP0126003

UNCLASSIFIED

2/3 022 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0126003

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TO A SOLN. OF 2.65 G MENHNH SUB2 IN 20 ML H SUB2 O WAS ADDED 5.23 G CH SUB2:CHCOCH(OET)SUB2 AND THE MIXT. EXTD. 12 HR WITH ETHER TO YIELD 78PERCENT I (X EQUALS (OET)SUB2) (II), B SUB8 95-7DEGREES, N PRIME20 SUBD 1.4540. A SOLN. OF 3.33 G II IN 18 ML N HCL WAS KEPT 3 HR AND MADE ALK. TO YIELD 63PERCENT I (X EQUALS O), B SUB3 70-3DEGREES, N PRIME20 SUBD 1.5410; OXIME HCL M. 162-3DEGREES (ABS. ETOH). SIMILARLY WAS OBTAINED 64PERCENT III (X EQUALS (OET)SUB2) (IV), B SUB18 95-8DEGREES, N PRIME20 SUBD 1.4525. IV.MEI, M. 120-1DEGREES REARRANGED ACCORDING TO B. V. JOFFE AND K. N. ZELENIN (1963) GAVE 98PERCENT ME SUB2 NCH(CH SUB2 CN)CH(OME)SUB2 B SUB4 86DEGREES, N PRIME20 SUBD 1.4430. II (5.53 G) IN 30 ML ANHYD. C SUB6 H SUB6 TREATED STEPWISE WITH STIRRING WITH PB (CAC)SUB4 GAVE AFTER 2.5 HR 78PERCENT 4,5 DEHYDRO ANALOG (V) OF II, B SUB3 101-4DEGREES, N PRIME20 SUBD 1.4645. HYDROLYSIS OF V GAVE 75PERCENT 4,5 DEHYDRO ANALOG OF I (X EQUALS O), B SUB2 72-4DEGREES, N PRIME20 SUBD 1.5132. A SOLN. OF 6.6 G 1 METHYLPYRAZOLE IN 40 ML ANHYD. ETHER WAS TREATED AT MINUS 10DEGREES WITH 5.8 G BULI IN 40 ML PETROLEUM ETHER, THE SUSPENSION STIRRED 1.5 HR AT ROOM TEMP., 8.03 G DMF IN 10 ML ANHYD. ETHER ADDED, AND THE WHOLE REFLUXED 1 HR, THE KEPT OVERNIGHT, TO YIELD 43PERCENT 4,5 DEHYDRO ANALOG (VI) OF III (X EQUALS O), B SUB4 50-3DEGREES, N PRIME20 SUBD 1.5012; OXIME HCL, M 164.5-5.5DEGREES (ETOH). VI (1.1 G) AND 1.6 G CH(OET)SUB3 IN 5 ML ANHYD. ETOH, TREATED WITH A FEW DROPS 30PERCENT HCL ETOH GAVE AFTER 20 HR 71PERCENT 4,5 DEHYDRO ANALOG (VII) OF III (X EQUALS (OET)SUB2), B SUB1 86-90DEGREES, N PRIME20 SUBD 1.4690.

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UNCLASSIFIED PROCESSING DATE--20NOV70

3/3 022

CIRC ACCESSION NO--AP0126003

ABSTRACT/EXTRACT--THE REACTION OF ME SUB2 NCH(CH SUB2 CN)CH(OET)SUB2 AND MENHNH SUB2.H SUB2 SO SUB4 (30PERCENT EXCESS) GAVE 81PERCENT MIXT., B SUB1 92-30DEGREES, N PRIME20 SUBD 1.4667, OF V AND VII. SOME IR DATA ARE GIVEN.

UNCLASSIFIED

Shaprinskaya, T.M.

AA0040539 UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent, 3/70

237110 TEST REACTOR FOR CATALYSIS AND KINETICS of high-boiling processes, has a cock 6 at the end of its inner tube 5 to form the glass joint member, tubes coaxial to this cock 4,5, used to connect to the inside of the cylindrical body 1 containing the catalyst chamber 2. The bottom end of the chamber forms a coil 14 with a layer of glass filament 15 on it so as to pack it into the cylinder 16. Cylinders 17,18 contain asbestos graphite packings 19,20 to seal off the inner cavity. Two independent and insulated flows are maintained during the period required for establishing test conditions; a flow of reaction mixture entering through the connection 21 to the body 1 and on through the orifice 7 in tube 4 to leave through 22; and a flow of inert gas

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entering via the cock 6 into the catalyst chamber 2 and so along channel 12 in the wall of the cone 11, the inner tube 23 and out through 24. Once conditions are right, the gas is stopped off. The catalyst chamber is coupled to the reagent flow by turning the cock plug. The catalysis schedule is now started up. By alternating reagent flow and inert gas supply a pulsating system can be provided. 15.9.67. as 1185674/23-26. SHAPRINSKAYA, T.M et al. L V. Pisarzhevskii Physical Chemistry Inst. Acad. Sciences. Ukrainian SSR. (8.7.69.) Bul.8/12.2.69. Class 12g. Int.Cl. B01j.

AUTHORS: Shaprinskaya, T. M.; Korneychuk, G. P.; Stasevich, V. P. and Semenyuk, Yu. V.

Institut Fizicheskoy Khimii imeni L. V. Pisarzhevskogo AN Ukrainskoy SSR

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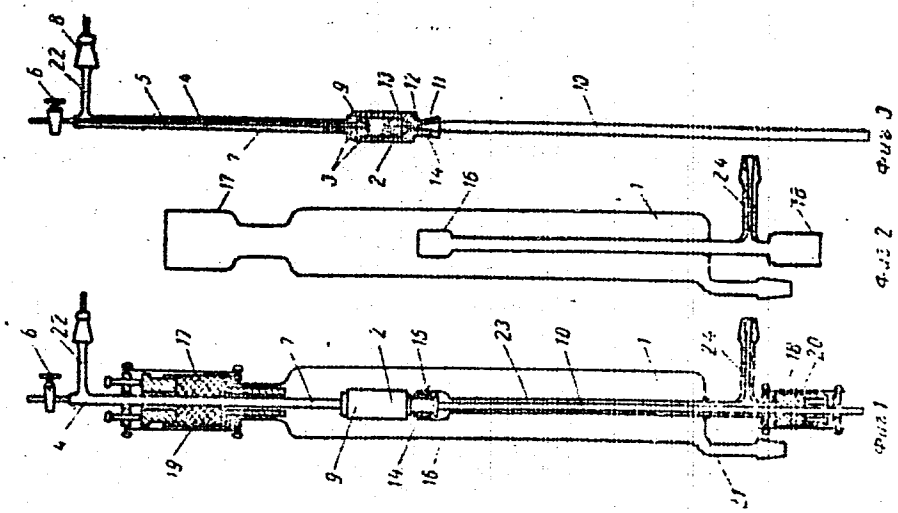
19750055

AA0040539



19750056

USSR

UDC 669.1:662.96

SHAPRITSKIY, V. N., State All-Union Institute for Planning of Metallurgical Plants

"Protection of the Atmosphere from Pollution by Cancerogenic Substances"

Moscow, Stal', No 10, 1972, pp 961-963

Abstract: An analysis is made of sources of air pollution from ferrous metallurgical plants. All phases of the plant operation from the various steel-making operations to transportation and heat supply for residential use in the city are considered. The sources of air pollution with organic cancerogenic substances at the metallurgical plants are the products of thermal processing of the fuel containing 3,4-benzpyrene, 1,12-benzperylene, and so on. These substances are formed from the organic compounds in the furnaces and chambers (operating without air or with a deficiency of it) beginning at temperatures of 400-500° C and, in particular, near 800° C. At temperatures above 1,000-1,100°C and in the presence of air, the aromatic hydrocarbons burn, forming harmless carbon dioxide and water vapor. Data are presented on the benzpyrene and benzperylene production from burning various forms of coal, oil and natural gas. Some special problems of coal tar production processes are noted such as the 3,4-benzpyrene content of the coking gas and the production of pollutants 1/2

USSR

SHAPRITSKIY, V. N., Stal', No 10, 1972, pp 961-963

in the slaking towers. The production rates of the pollutants in various processes are given, and some suggestions are made for pollution control such as trapping and burning the exhaust gases, raising certain process temperatures replacement of truck transportation by diesel and electric trains, and elimination of the small boiler units for residential heating with conversion to district heating from the heat and electric power plants.

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USSR

UDC 621.382.002(085.8)

YATSENKO, N.G., SHAPOSHNIK, K.I., NAYDENOVA, T.D., KAVAL'SKIY, YU.F.

"Control And Conditions Of Selective Etching Of Silicon By Anhydrous Hydrogen Chloride"

Elektron. tekhnika. Nauch.-tekhn.sb. Upr.kachestvom i standartiz (Electronics Technology. Scientific-Technical Collection. Quality Control And Standards), 1971, Issue 1(7), pp 91-97 (from RZh--Elektronika i yeye primeneniye, No 10, October 1971, Abstract No 10B451)

Translation: The dependence of the rate of etching of Si by anhydrous HCl at temperatures of 1100--1280° C on the basic thermodynamic and kinetic parameters is obtained. A course of reactions in the diffusion region is possible at temperatures of 1190--1280° C and in the kinetic at 1100--1160° C. The apparent energy activation of the surface of reaction computed from the relation lg V = f (I/T) is equal to 65 kcal/mole. During selective etching thermal SiO_2 is the most resistant to the effect of the gaseous medium. The surface of Si after processing with anhydrous HCl has a high degree of cleanliness and perfection. The optimum regime of etching Si is: temperature 1170° C, concentration of HCl in gas carrier (H_2) 0.019 percent, speed of gas flow in chamber 4 l/min. 7 ill. 2 ref. I.M.

1/1

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202910008-7"

SHAPTALA, A. Ya.

Automation

TECHNICAL TRANSLATION

FSTC-HT-23-485-71

ENGLISH TITLE: AUTOMATIC CONTROL OF FORGING PROCESSES

FOREIGN TITLE: AVTOMATICHESKOYE UPRAVLENIYE PROTSESSAMI SHTAMPOVKI

AUTHOR: A. Ya. Shaptala and I. A. Stakogrin

SOURCE: Leningrad: Izdatel'stvo "Mashinostroyeniye", 1969

Translated for FSTC by ACSI

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Pathology

USSR UDC 616.9-022.38-039:616.3-008.1001.33

BANKHANEN, V. D., DENISOV, K. A., ARTENOV, A. A., SITNIKOVA, G. M., SHAPTALA, V. A., and KHILINSKIY, V. P., Chair of Nutritional Hygiene and Epidemiology Donets Medical Institute imeni A. M. Gor'kiy, and Department of Nutritional Hygiene, Donets Municipal Sanitary Epidemiological Station

"Classification of Food Poisoning and Principles Underlying Its Compilation"

Moscow, Voprosy Pitaniya, No 6, Nov/Dec 71, pp 54-58

Abstract: Problems concerning classification of food poisoning and criteria to be considered are discussed, including the evolution of concepts of etiology, mechanisms of transmission, pathology and symptomatology, treatment and prevention, and data on international classification. A classification is proposed in which food poisonings are divided into four etiological categories: bacterial, nonbacterial, fungal, and of unclarified nature. According to the pathogenesis, the bacterial category is subdivided into two groups: toxininfections and bacterial toxicoses; while the nonbacterial category is subdivided into three groups specifying the pathogenic agents: additives, products inedible by man, and products which become temporarily or partly toxic

SHAPUNOV, N. M.

JPRS 53792
15 May 72

RESPIRATION OF BOTTLE-NOSED PORPOISES

[Article by A. Z. Kolchinskaya, O. G. Kasanskaya, V. S. Mishchenko, N. M. Shapunov, S. K. Matisheva and Yu. V. Stepanov, Kiev; Kiev, Biofizika, Russian, No 5, 1971, Izd-vo "Naukova Dumka," pp 19-28]

The specialization of the respiratory system in cetaceans in a water medium resulted in profound anatomic and functional changes in this system. Despite the fact that the singularity of respiration of marine mammals is of the greatest interest to biologists, zoologists, physiologists and specialists in bionics, until recently information on the physiology of respiration of these animals was limited due to the lack of appropriate conditions, such as oceanariums, large marine aquariums and apparatus for specialized investigations, and also due to certain systematic difficulties which faced biologists in investigating the respiration of marine mammals. Even at the present time not only respiration in the broad sense of this word, but even the pulmonary respiration of cetaceans, which is easier to study, have not been investigated adequately. Although a number of review articles and sections in monographs have been devoted to this subject [1,2,5-9,11-14,16-20,27-30,32, 33, 35-37,40-45], they give far more information on the ecology of these animals, the anatomy and histology of their organs of respiration than on physiology. Data on pulmonary and respiratory volumes, pulmonary ventilation, and on oxygen consumption have been obtained for a small number of small cetaceans [4, 15,21-26,31,34,38,39]. But even in these animals such important indices as total lung capacity and its components, composition of alveolar air, physiologic dead respiratory space, and alveolar ventilation have not been determined experimentally. Data on them have been cited on the basis of speculative conclusions.

The literature contains no information on the mechanics of respiration of dolphins. There is virtually no precise information on respiration regimes and on the factors exerting

SHAPUNOV, V. M.

JPRS 55982
15 May 72

SOME CHARACTERISTICS OF CHANGE IN RESPIRATION OF BOTTLE-NOSED PORPOISES ACCOMPANYING OXYGEN SHORTAGE IN THE BREATHED AIR

[Article by V. S. Mishchenko, V. M. Shapunov and S. K. Matisheva, Kiev; Kiev, Bionika, Russian, No 5, 1971, Izd-vo "Naukova Dumka," pp 28-37]

Study of the mechanisms of regulation of the singular respiration of dolphins, ensuring adaptation of the respiratory system to conditions of high motor activity in the water medium, has long attracted the attention of researchers [8, 13, 15, 19 and others]. However, at the present time there have been an extremely limited number of investigations of respiration of diving mammals, and in particular of dolphins, when there is an oxygen shortage in the breathed air.

This investigation, made under the direction of Doctor of Medical Sciences A. Z. Kolchinskaya, had as its objective a clarification of some aspects of this problem. In particular, a study was made of the changes in gas exchange, external respiration, and some indices of hemodynamics in bottle-nosed porpoises (*Tursiops truncatus*) during the breathing of hypoxic mixtures containing 11.7% O_2 in nitrogen. The investigations were made using seven healthy bottle-nosed porpoises weighing from 135 to 220 kg adapted to people and the experimental conditions. During the investigation the animals were in a motionless state on a soft surface in sea water (at a temperature of 22-23°C); this ensured a minimum of energy expenditure in maintaining the indicated position. Oxygen consumption was determined by the open method devised by Douglas and Holden. The samples of alveolar air were selected using an automatic device. Alveolar ventilation was computed by the Bohr method. The minute volume of circulation (MVC) was determined by the acetylene method as devised by Grohlman-Farin-Zhronov under normal conditions during the fifth minute of breathing of a hypoxic mixture. After conducting the necessary measurements when breathing atmospheric air (PIO_2 = 159 mm Hg) the animals were

1/2 016 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--DETERMINATION OF THE CALORIC VALUE OF DRY ORGANIC MATTER MIXED WITH BENZOIC ACID -U-
AUTHOR--SHAPUNOV, V.M.

COUNTRY OF INFO--USSR

SOURCE--GIDROBIOL. ZH., AKAD. NAUK UKR. SSR 1969, 5(5), 128-33

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CALORIC CONTENT, CRAB, ALGAE, YEAST, CHEMICAL ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/2057 STEP NO--UR/0474/69/005/005/0128/0133

CIRC ACCESSION NO--AP0108383
UNCLASSIFIED

2/2 016 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0108383

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CALORIC VALUE OF DRY ORG. MATTER WAS DETD. WITH AND WITHOUT THE ADDN. OF B SUBZ OH. DATA ARE PRESENTED FOR THE FOLLOWING: ISOPODA (IDOTHEA BALTICA BASTERI), CRAB (ERIPHIA SPINIFRONS), ECDYSIAL SKINS, ALGAE (ENTEROMORPHA SPECIES) AND BAKER'S YEAST. MATERIALS WERE FIRST DRIED TO CONST. WT. AND BURNED IN AN ATM. OF PURE O IN A SELF SEALING CALORIMETRIC CYLINDER. A 200 MG ALIQUOT OF THE TEST SUBSTANCES WAS BROUGHT UP TO 1 G WITH BENZOIC ACID (1:5 RATIO) FOR COMBUSTION. IN ALL CASES THE CALORIC VALUE WAS SOMEWHAT HIGHER WITH B SUBZ OH THAN WITHOUT IT AS A RESULT OF MORE COMPLETE COMBUSTION. WHEN BURNING MATERIAL WITH A HIGH MINERAL RESIDUE (UP TO 50PERCENT), IT IS NECESSARY TO DECREASE THE CALORIC VALUE OF THE DRY MATTER BY 2-3PERCENT, AND WHEN CALCG. THE CALORIC VALUE OF ASHLESS ORG. MATTER, TO INCREASE THE INDEX OF RELATIVE ASH CONTENT IN THE BURNED MATERIAL BY 10PERCENT. THE INDICATED CORRECTIONS SHOULD BE DETD. EXPERIMENTALLY FOR EACH NEW BIOL. MATERIAL IN ORDER TO OBTAIN MORE PRECISE RESULTS. FACILITY: INST. BIOL. YUZH. MOREI., SEVASTOPOL, USSR.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--EFFECT OF WATER IN OIL ON THE DECOMPOSITION OF THE VNIINP 360, ALL UNION SCIENTIFIC RESEARCH INSTITUTE FOR THE PROCESSING OF PETROLEUM AND

AUTHOR-(02)-SHAPOVALOVA, L.M., SAVONKINA, M.G.

COUNTRY OF INFO--USSR

SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW) 1970, (4), 32-3

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--LUBRICANT ADDITIVE, CHEMICAL STABILITY, CHEMICAL DECOMPOSITION, ZINC COMPOUND, BARIUM COMPOUND, WATER/(U)VNIINP360 ADDITIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/1952 STEP NO--UR/0318/70/000/004/0032/0033

CIRC ACCESSION NO--AP0133796

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--20NOV70

2/2 020

CIRC ACCESSION NO--AP0133796

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NO DECOMPN. OF THE ADDITIVE OCCURRED IN DRY OIL, BUT EVEN 0.03PERCENT H SUB2 O DECOMP. THE ADDITIVE TO GIVE PPTS. CONTG. THE BA AND ZN OF THE ADDITIVE. THE AMT. OF PPT. DEPENDED ON THE AMT. OF WATER. FACILITY: POLOTSK. NEFTEPERERAB. ZAVOD POLOTSK, USSR.

UNCLASSIFIED

SHAPYRIN V. I.

DEPARTMENT OF THE ARMY
U.S. ARMY FOREIGN SCIENCE AND TECHNOLOGY CENTER
220 SEVENTH STREET NE.
CHARLOTTESVILLE, VIRGINIA 22901

In Reply Refer to:
FSTC-HT-23-1695-72
DIA Task No. 770-23-01

Date: 20 December 197[illegible]

TRANSLATION

ENGLISH TITLE: ECONOMIC EFFECTIVENESS OF PROTECTIVE POLYMER COATINGS

AUTHOR: [illegible] REQUESTOR: AMXRES-EAS

SOURCE: Konservnaya i Ovoshchesushil'naya Promyshlennost' No. 1, 1971, pp 17-18

TRANSLATOR: AGSI K-1612

LANGUAGE: Russian

COUNTRY: USSR

KEY WORDS:
PLASTIC PRODUCTION
PLASTIC INDUSTRY
PROTECTIVE COATING
POLYMER
FOOD CANNING
FOOD TECHNOLOGY

Approved for public release; Distribution unlimited.

USSR

UDC 621.383

MOLCHANOV, A. A., OLEKSENKO, P. F., SVECHNIKOV, S. V., and SHARADKIN, A. N.

"Regenerative Optron Theory"

Kiev, Poluprovodnikovaya tekhnika i mikroelektronika, No. 6, 1971, pp 91-100

Abstract: The optron is an optical-electronic device which, operated with positive feedback, is widely used as a basic element in many devices. The theoretical investigation of its static and dynamic operation modes is connected with the solution of algebraic or nonlinear differential equations of a complex nature. The present paper analytically investigates the static and dynamic modes of the optron in regenerative optical feedback through the use of a power series approximation of the volt-brightness characteristic of the electroluminophor, with the electronic computer used at certain stages of the computation. As a result of the analysis, a conditon of compatibility for the impedance moduli of the electroluminophor and the photoresistor is obtained, which can be used as the basis for engineering computations of the optron. It is

USSR

MOLCHANOV, A. A., et al., Poluprovodnikovaya tekhnika i mikroelektronika, No 6, 1971, pp 91-100

found that the computation relationships found theoretically agree closely with the experimentally obtained expressions. The authors are connected with the Semiconductor Institute of the Ukrainian Academy of Sciences.

1/2 042 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--COATING TUBES BY THE THERMODIFFUSION METHOD -U-

AUTHOR-(04)-SHARADZENIDZE, S.A., KHARADZE, D.M., MINDLIN, I.G., YENUKASHVILI, M.A.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, METALLURG., NO 5, MAY 70, PP 38-39

DATE PUBLISHED----MAY70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--SEA WATER, METALLURGIC PLANT, METAL TUBE, PETROLEUM REFINING, METAL CORROSION, ZINC PLATING, ALUMINUM COATING PROTECTIVE COATING, METAL COATING, DURABILITY, METAL SURFACE IMPREGNATION, METAL DIFFUSION, ANTICORROSION ADDITIVE, ALUMINIZING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/0411 STEP NO--UR/0130/70/000/005/0038/0039

CIRC ACCESSION NO--AP0135882

UNCLASSIFIED

2/2 042 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0135882

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TUBES REFERRED TO IN THE TITLE ARE THOSE USED IN PETROLEUM REFINING. THESE TUBES MUST HAVE LONG SERVICE LIFE AND ARE USUALLY SUBJECTED TO CHEMICALLY AGGRESSIVE MEDIA. THE MOST EFFECTIVE COATINGS FOR SUCH TUBES ARE ZINC OR ALUMINUM APPLIED BY THE THERMODIFFUSION METHOD. IN THIS METHOD, THE SURFACE LAYER OF THE TUBE METAL IS IMPREGNATED TO A DEPTH OF 0.1-0.2 MM BY ZINC, ALUMINUM, OR SOME OTHER ANTI CORROSIVE ELEMENT DIFFUSED AT A PARTICULAR TEMPERATURE. TUBES COATED WITH ZINC BY THIS METHOD HAVE HIGHLY ANTI CORROSIVECHARACTERISTICS, WITH A DURABILITY 15 TIMES THAT OF UNTREATED TUBES IN A VARIABLE MEDIUM, SEA WATER AND AIR FOR EXAMPLE. IN THE RUSTAV METALLURGICAL PLANT, THE THERMODIFFUSION METHOD IS OPERATED ON AN INDUSTRIAL SCALE. A STEP BY STEP DESCRIPTION OF THE PROCESS IN GIVEN TOGETHER WITH A SCHEMATIC DIAGRAM OF THE EQUIPMENT INVOLVED. SOME FIGURES ARE GIVEN OF THE TUBE COATING PRODUCTION LEVELS FOR THIS PLANT.

FACILITY: RUSTAV METALLURGICAL PLANT.

UNCLASSIFIED

USSR S UDC 621.774:621.793.6

SHARADZENIDZE, S. A., KHARADZE, D. M., MINDLIN, I. G. (Deceased), YENUKASHVILI, M. A., Rustav Metallurgical Plant

"Coating Tubes by the Thermodiffusion Method"

Moscow, Metallurg., No 5, May 70, pp 38-39

Abstract: The tubes referred to in the title are those used in petroleum refining. These tubes must have long service life and are usually subjected to chemically aggressive media. The most effective coatings for such tubes are zinc or aluminum applied by the thermodiffusion method. In this method, the surface layer of the tube metal is impregnated to a depth of 0.1-0.2 mm by zinc, aluminum, or some other anti-corrosive element diffused at a particular temperature. Tubes coated with zinc by this method have highly anti-corrosive characteristics, with a durability 15 times that of untreated tubes in a variable medium -- sea water and air for example. In the Rustav Metallurgical Plant, the thermodiffusion method is operated on an industrial scale. A step-by-step description of the process is given together with a schematic diagram of the equipment involved. Some figures are given of the 1/1 tube-coating production levels for this plant.

USSR

UDC 532.72

KISLYAKOV, N. I., KEBROV, A. K., and SHARAFUTDINOV, R. G. (Novosibirsk)

"Diffusion Processes Within the Mixing Zone of a Low-Density Supersonic Jet"

Moscow, Zhurnal Prikladnoy Mekhaniki i Tekhnicheskoy Fiziki, No 1, 1973, pp 121-127

Abstract: In this paper are presented the results of an experimental investigation of diffusion processes in a low-density jet behind a strongly underexpanded sonic nozzle in a zone of mixture with the surrounding gas. The structure of the jet during the expansion of N_2 into an atmosphere of $CO + N_2$ in regimes of the transition from continuous flow to rarefied flow were studied by means of electron-beam diagnostic equipment. Results of an analysis of the concentration fields of individual components are given in generalized form. In conclusion, the approximate limits of the characteristic regimes are indicated for diatomic gases with properties similar to those of nitrogen. 7 figures, 1 table, 12 references.

1/1

USSR

REBROV, A.K., CHEKMAREV, S.F., SHARAFUTDINOV, R.G. (Novosibirsk)

"The Influence of Rarefication Upon the Structure of a Free Jet of Nitrogen"

Moscow, Zhurnal Priklandoy Mekhaniki i Tekhnicheskoy Fiziki, No 1, 1971, pp 136-141

Abstract: The influence of rarefication upon the structure of a free nitrogen jet is studied systematically on the basis of measurement of the density distribution. A quantitative and qualitative link is discovered between the intensity of the Mach disk in a jet of rarefied gas with density and incalculability. For the construction of a complete qualitative model of the initial sector of the jet behind a sonic nozzle at low density, it is necessary to investigate the conditions of transition from the described viscous flow to such a flow at which the change of density at the shock wave will be subject to the Hugoniot adiabat. 8 figures, 1 table, 4 bibliographic entries.

1/1

USSR

UDC: 532.522.2

VOLCHKOV, V. V., IVANOV, A. V., KISLYAKOV, N. I., REBROV, A. K., SUKHNEV, V. A., and SHARAFUTDINOV, R. G.

"Low-Density Jets from a Sonic Nozzle at Large Pressure Drops"

Moscow, Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, No 2, 1973, pp 64-73

Abstract: Experiments are described for the observation of low-density gas dynamic jets using electron-beam analysis and the Pitot tube. A full description of the apparatus and the experimental method is given in earlier papers on which the present article is based (A. K. Rebrov, et al, Vliyaniye razrezhennosti na strukturu svobodnoy strui azota -- Effect of Rarefaction on the Structure of a Free Nitrogen Jet -- PMTF, No 1, 1971, and others). These experiments used sonic nozzles consisting of openings in a thin wall with a ratio of wall thickness to opening diameter of less than 0.05. With a Reynolds number greater than 200 at the nozzle opening, the effect of the boundary layer in the nozzle can be neglected and the flow factor of the nozzle can be taken equal to unity. Nitrogen, air, and carbon dioxide at a drag temperature of 300° K were used as the operating gases. The purpose of the experiments was to study the structure of longitudinal and transverse gas

USSR

UDC: 532.522.2

VOLCHKOV, V. V., et al, Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, No 2, 1973, pp 64-73

dynamic parameter distributions in the initial part of the jet, and set up a detailed picture of the jet flow for Reynolds numbers reduced to values corresponding to the dispersion modes for which the local mean free path of the molecules is commensurate with the flow dimensions.

2/2

USSR UDC 576.858.43.097.5

RAVILOV, A. Z., SHAFIKOVA, R. A., and SHARAFUTDINOVA, K. N., Veterinary Institute imeni N. E. Bauman, Kazan

"The Accumulation of Specific Antibody Against the Foot-and-Mouth Disease Virus in Ascitic Fluid of White Rats"

Moscow, Voprosy Virusologii, No 4, 1973, pp 458-461

Abstract: Ascitic fluid formation was induced in white rats (mostly males), 180-200 g in weight, by intraperitoneal injection of ovary tumor cells. Nine days previously the animals had received a single injection of foot-and-mouth disease virus A22 or 0194, or had been hyperimmunized. The results showed that both sets of animals showed peak CF titers 8 days following the induction of ascitic fluid formation; CF and neutralizing activity (5-7 day old white mice) were parallel for the sera and corresponding ascitic fluids. The ascitic fluids showed no anticomplement activity and, as a rule, appeared 5-6 days after injection of the ovarian cells. Ascitic fluids retained their antibody activities for 8 months at -20°C and at 4°C in the presence of 1:100,000 methiolate.

1/1

USSR UDC 619:576.858.4-809.7

RAVILOV, A. Z., Candidate of Veterinary Sciences, SHAFIKOVA, R. A., Candidate of Biological Sciences and SHARAFUTDINOVA, K. N., Veterinarian, Kazan' Veterinary Institute

"IMMune Ascitic Fluids for Typing Foot-and-Mouth Disease Virus"

Moscow, Veterinariya, No 1, 1972, pp 33-34

Abstract: Ascites production was stimulated in rats by injecting them with testicular tumor cells. Five days later about 70 to 100 ml of ascitic fluid containing specific antibodies to foot-and-mouth disease virus was obtained from each rat. These antibodies were highly specific and had pronounced complement-fixing and precipitating activity (equal to that of blood serum). Anitbodies remained active and specific for 8 months when stored at 4° C with a preservative or at -20° C without a preservative. Thus, immune ascitic fluid is a relatively inexpensive and convenient diagnosticum for typing foot-and-mouth disease virus.

1/1

USSR

UDC: 51:330.115

SHARAKSHANE, A. S., ZHELEZNOV, Zh. Y.

"On the Process of Developing Mathematical Models of Large Systems"

V sb. Nauch. i prakt. probl. bol'shikh sistem. Sekts. Bol'shiye sistemy. Teoriya, metodol., modelir. (Scientific and Practical Problems of Large Systems--collection of works. Large Systems Section. Theory, Methodology, Modeling), Moscow, "Nauka", 1971, pp 186-191 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V863)

[No abstract]

1/1

USSR UDC 801.51

SHARANDA, A. N., KRYSEVICH, V. S.

"Algorithmic Recognition of Grammatic Homonymies (Based on Case Forms of the German Article Der)"

Voprosy Lingvostatistiki i Avtomatizatsii Lingvisticheskikh Robot. Vyp. 3. [Problems of Linguistic Statistics and Automation of Linguistic Work. No. 3]. Moscow, 1970, pp 43-56. (Translated from Referativnyy Zhurnal Kibernetika, No. 4, April, 1971, Abstract No. 4 V733).

Translation: The problem is studied of eliminating grammatical homonymies in machine translation. An algorithm is described for differentiating case forms of the article der. Computer experiments were performed using a dictionary of the 435 most frequently used nouns, selected from 20,000 word combinations. A block diagram of the program and results of the experiments are presented.

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USSR UDC 669.168:621.746

SHARANOV, M. A., SILUKOV, G. A., KOROLEV, A. A., KRYLOV, I. A., and VESELOVSKIY, A. Ya. (All-Union Scientific Research Institute of Heat Engineering in Metallurgy /VNIIMT/; Serov Plant of Ferroalloys)

"Study of the Granulation Process of Silicochrome"

Moscow, Stal', No 4, Apr 72, pp 321-323

Abstract: Described is a joint study by the All-Union Scientific Research Institute of Heat Engineering in Metallurgy and the Serov Plant of Ferroalloys involving plant-scale experiments on silicochrome granulation. The objective of the study was to determine the causes of explosions (during the process) and to develop preventive safety measures. The potential causes of explosions are theorized to include the clogging of nozzles and obstructing the metal stream, disintegration of the refraction control mesh constraining the feed of the liquid alloy to the granulation tank, fracture of the lining of the overflow trough snout, excessive distance between the trough snout and the nozzles, etc. The relationship between the granulometric composition of the granulated material and the water supply parameters has been established. Recommendations are made to exclude the limitation on water temperature in the granulation tank to 40°C from the standard technical

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USSR
SHARANOV, M. A., et al, Stal', No 4, Apr 72, pp 321-323

specifications as well as to introduce other relevant technological refinements. The study proposes a new explosion-free granulation technology. (3 illustrations).

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-1- 2

USSR

UDC:669.187.6

MATUSHKINA, L. I., KLYUYEV, A. M., DEDUSHEV, L. A., KOSYREV, L. K., VOLKOV, S. Ye., and SHARAPOV, A. A.

"Thermal Inertia in Electric Slag Remelting"

Proizvodstvo Chernykh Metallov [Production of Ferrous Metals--Collection of Works], No 75, Metallurgiya Press, 1970, pp 167-169

Translation: The influence of stopping (for 1-5 min) the electric slag process on the final macrostructure of ingots of high-chrome heat-resistant steel type EI961, high-chrome manganese steel type EI835, and type ShKh15 ball bearing steel is studied.

The surface of the ingots produced is satisfactory with slight corrugations in the areas where the process was stopped. Obviously, the corrugations are caused by local disruption of the dynamic equilibrium between heat input and outflow.

However, the stopping of the process within the limits studied does not cause appearance of macrostructural defects, since under the conditions of electric slag remelting the metal bath has significant thermal inertia. 1 table.

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UDC 669.187.26

USSR

BUSHMELEV, V. M., TYURIN, YE. I., DUMCHEV, YA. P., KATAYEV, V. M., VOLKOV, S. YE., PUPYNINA, S. M., SHARAPOV, A. A., BAGLAY, V. M., MEDOVAR, B. I., LATASH, YU. V., Krasnyy Oktyabr' Plant, Central Scientific Research Institute of Ferrous Metallurgy and Institute of Electric Welding imeni Ye. O. Paton, Academy of Sciences Ukrainian SSR

"Production of 4-Ton Ingots in a Bifilar Electroslag Remelting Furnace"

Moscow, Stal', No 3, Mar 70, pp 236-238

Abstract: The article describes a bifilar electroslag remelting scheme developed at the Institute of Electric Welding imeni Ye. O. Paton, which provides for the melting in one crystallizer of two electrodes, isolated from each other, which are attached to one electrode holder and connected to the ends of the secondary winding of a single-phase transformer with the same power as in a single-electrode furnace. In order to obtain rectangular 640X460 ingots weighing 4 tons, one of the electroslag remelting furnaces of the Krasnyy Oktyabr' Plant, designed for

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USSR

BUSHMELEV, V. M., et al, Stal', No 3, Mar 70, pp 236-238

the production of 2-ton ingots according to the single-electrode scheme and equipped with a single-phase 1000-kva transformer, was remodeled for melting according to the bifilar scheme. Only the mechanical part of the furnace underwent alteration. Slag systems used for the melting included CaF_2-Al_2O_3, CaF_2-CaF_2-CaO-Al_2O_3, and CaF_2-CaO-Al_2O_3-MgO. It was found that the production of metal of satisfactory quality in the bifilar furnace requires the same degree of submersion of the electrodes in the slag bath, as well as keeping the electrode spacing unchanged during the melting. This was accomplished with the use of simple devices. The bifilar scheme approximately doubles furnace productivity and reduces electric energy consumption by 25-29 percent. Data are presented on the quality of 4-ton ingots of ball-bearing steel ShKh 15, structural steel 40KhNMA and stainless sheet steels 10Kh12NVMFA (EI962) and Kh23N18 obtained on the bifilar furnace.

2/2

USSR

UDC: 531.717.1

SHARAPOV, A. S., SOLOV'YEV, L. K.

"A Device for Measuring the Exit Diameter of a Jet Nozzle"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 8, Mar 72, Author's Certificate No 330331, Division G, filed 30 Oct 70, published 24 Feb 72, p 124

Translation: This Author's Certificate introduces a device for measuring the exit diameter of a jet nozzle. The device contains a housing which accommodates a set of guides radially arranged in a single plane and equal in number to the number of nozzle flaps. Measuring rods which contact the nozzle flaps during measurement are located in the guides so that they can be moved in the axial direction. As a distinguishing feature of the patent, measurement accuracy is improved by equipping the device with a converter which changes the displacement of the measuring rods to an electric signal. The converter is made in the form of variable resistors in series connected into the electric circuit. The resistors are fastened to the guides, and their slide wires are fastened to the measuring rods. Readout is on a meter graduated in linear quantities.

1/1

USSR

UDC: 621.373.52

SHARAPOV, A. V., Tomsk Institute of Radio Electronics and Electronic Technology

"A Very Low Frequency Pulse Generator"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 17, Jun 72, Author's Certificate No 340065, Division H, filed 28 Sep 70, published 24 May 72, p 189

Translation: This Author's Certificate introduces a very low frequency pulse generator which contains a transistorized relay with feedback resistor, and an integrated circuit based on two transistors. As a distinguishing feature of the patent, the device is simplified and its overall dimensions are reduced by basing the time-mark feedback element on integrated circuitry, one of the transistors of the integrated circuit being used as the first transistor of the relay. Connected between the emitter of the second relay transistor and the feedback resistor, in the reverse direction, is the emitter-base junction of the second transistor in the integrated circuit.

1/1

1/2 019 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--THE SPINAL RETICULAR FORMATION IN THE PATHOGENESIS OF AN ISCHEMIC DISORDER OF SPINAL CIRCULATION -U-

AUTHOR-(02)-SHARAPOV, B.I., GERMAN, D.G.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL NEVROPATOLOGII I PSIKHIATRII IMENI S. S. KORSAKOVA, 1970, VU 70, NR 4, PP 540-545

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SPINAL CORD, HEMORRHAGE, BLOOD CIRCULATION, MORPHOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1667 STEP NO--UR/0246/70/070/004/0540/0545

CIRC ACCESSION NO--AP0106413

UNCLASSIFIED

2/2 019 UNCLASSIFIED PROCESSING DATE--09OCT70
CIRC ACCESSION NO--AP0106413
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ON THE BASIS OF A STUDY OF 100 CASES WITH ISCHEMIC DISORDERS OF SPINAL CIRCULATION (WITH A CLINICO MORPHOLOGICAL ANALYSES OF 15 CASES) THE AUTHORS ELIMINATE SOME SYMPTOMS OF SPINAL RETICULAR FORMATION LESIONS. THE MAIN FEATURES CONCERN THE DISTURBED TROPHICAL SYMPTOMS IN THE WALLS OF THE SPINAL CORD (A THICKENING AND RAREFICATION OF THE WALLS), CHANGES IN THE INTERNAL ORGANS (CARDIAC AND RESPIRATORY DISORDERS WITH MICROHEMORRHAGES) AND A DEVELOPMENT OF ISCHEMIC FOCI APART FROM THE MAIN ONE.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--STATISTICAL ANALYSIS OF THE SPIN DEPENDENCE OF THE NEUTRON STRENGTH FUNCTION OF THE NUCLEUS -U-
AUTHOR-(04)-MALETSKIY, KH., PIKELNER, L.B., SALAMATIN, I.M., SHARAPOV, E.I.
COUNTRY OF INFO--USSR

SOURCE--(KFK-TR-308), FROM REPORT JINR-P3-4484, 25P. DEP. CFSTI

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--NUCLEAR SPIN, NEUTRON, NUCLEUS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/1913 STEP NO--UR/0000/70/000/000/0001/0025

CIRC ACCESSION NO--AT0127314

UNCLASSIFIED

2/2 010 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AT0127314

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STATISTICAL PROPERTIES OF THE ESTIMATIONS OF THE STRENGTH FUNCTIONS ARE DERIVED, AND THE DISTRIBUTION OF THE DIFFERENCE OF THE STRENGTH FUNCTION FOR TWO SPIN STATES IS DETERMINED THEORETICALLY. THE THEORETICAL RESULTS ARE COMPARED WITH EXPERIMENTAL DATA FROM THE LITERATURE. THE RESULTS SHOWED THAT THE DIFFERENCE IN THE STRENGTH FUNCTIONS DOES NOT OCCUR IN ALL NUCLEI BUT ONLY IN INDIVIDUAL MASS NUMBER AREAS. WHERE THE STRENGTH FUNCTIONS VARY STRONGLY WITH A, THE CHARACTERISTICS OF THE DIFFERENCES ARE DIFFICULT TO DETERMINE WITHIN THE FRAMEWORK OF THE ANAYSIS MADE, ESPECIALLY AS THERE ARE NO THEORETICAL ASSUMPTION ON THE SIGN AND MAGNITUDE OF THE EFFECT TO EXPECTED. THERE IS NO BASIS FOR THE ASSUMPTION OF AN ESSENTIAL AND COMMON DEPENDENCE OF THE STRENGTH FUNCTION ON THE SPIN. FACILITY: JOINT INST. FOR NUCLEAR REASEARCH, DUBNA, USSR.

UNCLASSIFIED

1/2 009 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--STATISTICAL ANALYSIS OF SPIN DEPENDENCE OF NEUTRON STRENGTH FUNCTIONS FOR NUCLEI -U-

AUTHOR-(04)-MALECKI, H., PIKELNER, L.B., SALAMATIN, I.M., SHARAPOV, E.I.

COUNTRY OF INFO--USSR

SOURCE--YAD. FIZ. 1970, 11(1), 111-21

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--STATISTIC ANALYSIS, NUCLEAR SPIN, NEUTRON, NUCLEUS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1976/0426 STEP NO--UR/0367/70/011/001/0111/0121

CIRC ACCESSION NO--AP0042462

UNCLASSIFIED

2/2 009 UNCLASSIFIED PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0042462

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SIMPLE ANAL. EXPRESSION IS OBTAINED FOR THE DISTRIBUTION OF THE NEUTRON STRENGTH FUNCTIONS OF NUCLEI. BY USING THIS EXPRESSION AS THE BASIS, THE DISTRIBUTION OF DIFFERENCE OF THE STRENGTH FUNCTIONS FOR 2 SPIN STATES IS OBTAINED. A STATISTICAL ANAL. FOR 28 NUCLEI SHOWED THAT THE EXPTL. OBSD. DIFFERENCES OF THE STRENGTH FUNCTIONS FOR VARIOUS SPIN SYSTEMS ARE MAINLY DETD. BY THE STATISTICAL FLUCTUATIONS OF THE N WIDTHS. THE EXPTL. DATA WERE EVALUATED STATISTICALLY FOR ALL THE NUCLEI OF KNOWN STRENGTH FUNCTION S(J). IT IS CONCLUDED THAT THERE IS NO BASIS FOR ASSUMING THE EXISTENCE OF A GENERAL AND ESSENTIAL RELATION BETWEEN THE STRENGTH AND THE SPIN FOR MOST OF THE NUCLEI. FACILITY: OB'EDIN. INS. YAD. ISSLED., USSR.

UNCLASSIFIED

USSR

DUBINSKIY, A. M., SHARAPOV, G. V., Kiev

UDC 624.046

"Supporting Power of Shells in the Form of a Hyperbolic Paraboloid"

Kiev, Prikladnaya Mekhanika, Vol VII, No 4, 1971, pp 44-50

Abstract: Results are presented from an experimental-theoretical study of the supporting capacities of mildly sloping reinforced concrete shells in the form of equilateral hyperbolic paraboloids square in the plan view under the effect of a uniformly distributed vertical load. Shells supported at the lower corners and along the outline with the lower corners secured against horizontal displacements are investigated. An analysis is performed by the kinematic method of the theory of limiting equilibrium. Tabulated data are presented for comparison of the experimental and theoretical values of the supporting capacity of shells supported along the outline with the lower corners secured against horizontal displacements. The shells with lower corner support and secured against horizontal displacements rupture with respect to the two-disc scheme. The hypar type shell supported along the outline with nondisplaceable lower corners in the state of limiting equilibrium behave the same as with lower corner support. The rigidity of the shell outline has no effect on the nature of its operation in the limiting equilibrium stage. Coverings in the form of

DUBINSKIY, A. M., et al., Prikladnaya Mekhanika, Vol VII, No 4, 1971, pp 44-50

equilateral hyperbolic paraboloids transmit all the load to the lower corners, which must be secured against horizontal displacement. There is no necessity for constructing the supports along the outlines and the upper corners since the edge of the shell is lifted off the supports in the elastic stage.

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USSR

UDC 615.217.015

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"Contribution to the Pharmacology of Temechine, a New Ganglion-Blocking Agent"

Moscow, Farmakologiya i Toksikologiya, No 6, 1972, pp 687-690

Abstract: Temechine is a Soviet preparation, 2,2,6,6-tetramethylquinuclidine. A white crystalline powder readily soluble in water, it is the piperidine analog of pyrilene, a potent ganglion-blocking agent used in the treatment of hypertension and some other diseases. Experiments on cats showed that it blocks the N-cholinoreactive systems of the autonomic ganglia, adrenal medulla, carotid glomeruli, and central nervous system, but has no effect on the N-cholinoreactive systems of the skeletal muscles. Temechine has a pronounced and relatively prolonged hypotensive effect in cats. It also inhibits pressor reflexes elicited by electrical stimulation of the sciatic nerve or by compression of the common carotid artery. Study of the systemic action and toxicity of temechine in mice, rats, rabbits, and dogs revealed it to possess low toxicity after both single and repeated administration.

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USSR

UDC 615.31:547.834.4

LEVKOYEVA, YE. I., NIKITSKAYA, YE. S., SHARAPOV, I. M., and YUSHKOV, L. N.; All-Union Scientific-Research Chemico-Pharmacological Institute imeni S. Ordzhonikidze, Moscow

"Synthesis and Pharmalogical Study of the Polyalkylquinomucleidines"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 5, No 9, 1971, pp 16-21

Abstract: The high ganglioblocking and hypotensive activity of 3-hydroxy-2,2,6,6-tetramethylchinuclidine (recommended in the form of the preparation "Tenekhine" for wide medical use by the USSR Ministry of Public Health) prompted research into other polyalkylchinuclidines. Sixteen members of this group were studied by the authors. Basic chemico-physical data were determined, along with some information on toxicity.

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USSR UDC: None 3

TAKIBAYEV, Zh. S., BOOS, E. G., SAN'KO, L. A., MUKHORDOVA, T. I., MOSIYENKO, A. M., ZAYTSEV, K. G., and SHARAPOV, K. V., Institute of High-Energy Physics, Kazakhstan Academy of Sciences

"Studying Four-Beam pp-Interactions at pulses of 19.1 Gev/s"

Moscow, Yadernaya Fizika, vol 16, No 5, 1972, pp 974-982

Abstract: The purpose of the present paper is to study the general dynamic characteristics of secondary particles from four-beam proton-proton interactions, such as pulse and angle distributions, inelasticity, and correlation between nucleons, at primary pulses of 19.1 Gev/s. A comparison of the experimental and theoretical results is also made. The difference between the approach taken by the experiments of this paper and that of earlier work in the same direction is that the present paper takes into account information regarding the nature of the charged particles obtained by direct measurements of the ionization loss density. The experiments involved observations in a two-meter waveguide of a bubble chamber irradiated by protons with a pulse of 19.1 ± 0.1 Gev/s, in which 17,700 events were recorded and 11,000 interactions were

USSR UDC: None

TAKIBAYEV, Zh. S., et al, Yadernaya fizika, vol 16, No 5, 1972, pp 974-982

selected for measurement. A table is given of various methods of obtaining experimental data and the corresponding results. Comparison of the theoretical and experimental results indicates that the multiperipheral model on which the former is based shows closer agreement with the experimental distribution of inelastic pp interaction, depending on the number of secondary charged particles. The authors express their appreciation to the Committee on Track Chambers of CERN, workers in the Laboratory of Elementary Particles, the Division of Computer Techniques, and the Mathematical Physics Laboratory of the IFVE[Institute of High-Energy Physics] of the Kazakhstan Academy of Sciences, as well as the LVTA Laboratory of the Joint Institute of Nuclear Research.

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1/2 017 UNCLASSIFIED PROCESSING DATE--23OCT7C

TITLE--CALLICREIN OF THE URINE AND SOME INDICES OF RENAL FUNCTION -U-

AUTHOR-(04)-NEKRASOVA, A.A., CHERNOVA, N.A., SHARAPOV, U.B., KOVALEVA, N.T.

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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A STUDY WAS MADE OF THE 24 HOUR EXCRETION OF CALLICREIN WITH THE URINE OF 33 HEALTHY PERSONS AND 68 PATIENTS SUFFERING FROM VARIOUS CIRCULATORY DISTURBANCES OF THE KIDNEYS CALLICREIN WAS ASSESSED BY DETERMINATION OF ITS ESTERASE ACTIVITY. THERE WAS FOUND A DIRECT RELATIONSHIP BETWEEN THE URINARY EXCRETION OF CALLICREIN AND THE EFFECTIVE RENAL BLOOD FLOW. CALLICREIN EXCRETION DI NOT DEPEND ON THE FILTRATION REABSORPTION FUNCTION. EXRETION OF CALLICREIN BY THE KIDNEYS WAS REDUCED IN CASES WITH CONSIDERABLE CHANGE OF THE RENOGRAM. IN RENOVASCULAR HYPERTENSION URINARY EXCRETION OF CALLICREIN FELL IN CASES OF BILATERAL STENOSIS OF THE RENAL ARTERIES WITHOUT ADEQUATE DEVELOPMENT OF COLLATERAL CIRCULATION AND ALSO IN UNILATERAL STENOSIS, BUT WITH DISTURBED FUNCTION OF CONTRALATERAL KIDNEY. IT WAS FOUND IN EXPERIMENT ON 20 RABBITS WITH RENOVASCULAR HYPERTENSION THAT ISCHEMIC KIDNEY CONSIDERABLY REDUCED THE SECRETION OF CALLICREIN, WHEREAS THE INTACT KIDNEY INCREASED ITS EXCRETION COMPENSATORILY. FACILITY: INST. KARDIOLOGII IM. A. L. MYASNIKOVA AMN SSSR, MOSCOW.

UNCLASSIFIED

USSR

UDC 621.221.003.1:551.48

AVAKYAN, A. B., SHARAPOV, V. A., SHAPIRO, L. N.

"Requirements of Water Conservancy Branches for Flash and Level Modes and Recommendations with Respect to Improving the All-Around Use of Reservoirs"

Tr. koordinats. soveshchaniy po gidrotekhn (Works of the Coordinating Conferences on Hydroengineering), No 59, 1970 (from RZh-Elektrotekhnika i Energetika, No 2, Feb 71, Abstract No 2 D57)

Translation: The generalized requirements of each branch with respect to level conditions of reservoir operation and necessary flashes from it are listed in detail for the basic branches of water conservancy (power engineering, agriculture, water transportation and logging), the fishing industry, water supplies and sewage). The requirements of other branches are briefly described. The contradictory nature of the requirements of the various branches is noted. This leads to incomplete satisfaction of them. Optimization of the operating conditions of the hydroengineering complex is complicated by the absence of a method of estimating the national economic effectiveness of various conditions of operation of it and absence of a number of branch procedures. However, this does not exclude the possibility of development and implementation of a number of measures to improve the all-around use of water resources. A list of measures is proposed realization of which must be provided for in projected plans and national economic plans simultaneously with the construction of the

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AVAKYAN, A. V., et al., Tr. koordinats. soveshchaniy po gidrotekhn., No 59, 1970.

hydroengineering complex. Periodic investigation and reconfirmation of the basic use rules for water resources of reservoirs and also conversion to compilation of analogous rules for the hydroengineering complex cascade are considered expedient. A list of most important scientific research problems connected with improving the effectiveness of using hydroengineering complexes is presented. The bibliography has 13 entries.

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USSR

UDC 629.12.004.4

KONSERVATSIYA SUDOV (The Inhibiting of Ships), by K. V. Nasonov and V.D. Sharapov, Leningrad "Sudostroyeniye" 1972, 152 pp, illus, biblio, 2,300 copies printed

The book discusses the problem of inhibiting ships during completion of construction or adding-on construction, extended repairs and forced layover. The authors describe the reasons for the corrosion of ship installations, the factors which cause aging of various nonmetallic materials used in ship-building, and the modern methods of inhibiting ships. The discussion includes main and auxiliary mechanisms , electrical equipment, systems, equipment and radio. Practical recommendations are given for de-inhibiting.

The book is intended for a wide number of specialists in the ocean and river fleets and engineering-technical workers in ship building and ship repair facilities.

The foreword explains that, while the word "konservatsiya" has until recently meant the application of preservative greases and varnishes to metallic surfaces to protect the surfaces from corrosion, it now is understood as the complex of measures directed toward the preservation of any equipment and whole ships during a period of inaction.

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KONSERVATSIYA SUDOV (The Inhibiting of Ships) by K.V.Nasonov and V.D.Sharapov, Leningrad 1972, 152 pp

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